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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/777,665	02/13/2004	Robert C. Henderson	10030965-1	5644

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EXAMINER

HOPKINS, ROBERT A

ART UNIT PAPER NUMBER

1724

DATE MAILED: 06/05/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/777,665

Applicant(s)

HENDERSON, ROBERT C.

Examiner

Robert A. Hopkins

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 22 May 2006.
2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
4a) Of the above claim(s) _____ is/are withdrawn from consideration.
5) ☒ Claim(s) 11-18 is/are allowed.
6) ☒ Claim(s) 1-6, 8-10, 19 and 20 is/are rejected.
7) ☒ Claim(s) 7 is/are objected to.
8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 112

Claims 19 and 20 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 19 recites a preamble indicating an apparatus(a computer readable medium), but recites process limitations within the body of the claim. Therefore, because examiner is unsure of the statutory class of claim presented(apparatus or process), the claim is indefinite, and the claim should be amended to provide for a single statutory class of invention. Claim 20 depends on claim 19 and hence is also rejected.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-6 and 8-10 are rejected under 35 U.S.C. 102(b) as being clearly anticipated by Japanese reference(2001-305118).

Japanese reference teaches a system for sub-ambient pressure control for column head pressure in a gas chromatography system(gas chromatography column 6) comprising an inlet including a valve(2) that regulates an inlet pressure, a pressure

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sensor(9) that measures the inlet pressure and outputs a signal(P) that indicates a measured inlet pressure, wherein the inlet includes an inlet-pressure set point(preset threshold S) that can be set to a negative pressure set-point representing a pressure below ambient pressure, the negative pressure set-point driving the valve(see dotted line arrow in figure 1 connected to valve(flow control part 2)) to change the inlet pressure until the measured inlet pressure equals the negative pressure set point(abstract lines 6-8 under solution). Examiner notes that adjusting the flow rate using valve 2 is proportional to adjusting the inlet pressure, and the inlet pressure can be deduced by taking the flow rate and calculating pressure through specified expression in arithmetic unit 10. Japanese reference further teaches a mass spectrometer connected to the capillary column Japanese reference further teaches an electronic pressure controller(12) that drives the valve(2) in response to the inlet pressure set-point and the measured inlet pressure. Japanese reference further teaches wherein the pressure sensor is a gauge pressure sensor. Japanese reference further teaches wherein the GC includes instructions on a computer readable medium(comparator 12) for setting the inlet pressure set point to a negative pressure set point, and driving the valve(2) to change the inlet pressure until the measured inlet pressure equals the negative pressure set-point. Japanese reference further teaches wherein the inlet includes an error amplifier that receives the measured inlet pressure signal and an inlet-pressure set-point signal and outputs a decreasing drive to the valve when the inlet pressure set point is less than the measured inlet pressure signal. Japanese reference further teaches wherein the MS includes a vacuum pump(8)

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connected to the capillary column(6). Japanese reference further teaches wherein the inlet includes a septum purge and a cap on the septum purge . Japanese reference further teaches a computer, connected to the GC including a processor, and a memory that includes instructions executed by the processor for setting the inlet pressure set point to a negative pressure set point, and causing the valve to change the inlet pressure until the measured inlet equals the negative pressure set point.

Claims 19 and 20 are rejected under 35 U.S.C. 102(b) as being clearly anticipated by Japanese reference(2001-305118).

Japanese reference teaches a computer readable medium(12) comprising instructions.

Allowable Subject Matter

Claims 11-18 are allowed.

The following is a statement of reasons for the indication of allowable subject matter:

Claims 11 and 18 include subject matter which was indicated as allowable in the previous office action. Claims 12 and 13 depend on claim 11 and hence are also allowed.

Claim 14 recites "receiving a desired negative pressure set-point representing a pressure below ambient pressure; and setting an inlet pressure set-point to the desired negative pressure set-point indicates a desired negative inlet pressure for an inlet of the GC". Japanese reference fails to teach the above recited method steps. Although Japanese reference includes comparator structure for receiving an input value, the

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comparator structure does not receive a desired negative pressure set-point representing a pressure below ambient pressure. It would not have been obvious to someone of ordinary skill in the art at the time of the invention to provide steps of receiving a desired negative pressure set-point representing a pressure below ambient pressure; and setting an inlet pressure set-point to the desired negative pressure set-point indicates a desired negative inlet pressure for an inlet of the GC because Japanese reference does not suggest such a modification. Claims 15-17 depend on claim 14 and hence are also allowed.

Claim 7 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Claim 7 recites "wherein the error amplifier outputs an increasing drive to the valve that causes the valve to increase the inlet pressure". Japanese reference only teaches outputting a decreasing drive to the valve. It would not have been obvious to someone of ordinary skill in the art at the time of the invention to provide an error amplifier which outputs an increasing drive to the valve that causes the valve to increase the inlet pressure because Japanese reference does not suggest such a modification.

Response to Arguments

Applicant's arguments filed 5-22-06 have been fully considered but they are not persuasive.

Applicant argues Shimomura does not expressly or inherently describe “wherein the inlet includes an inlet-pressure set-point that can be set to a negative pressure set-point representing a pressure below ambient pressure”. Examiner respectfully submits that Shimomura teaches the structural limitations for the inlet for the gas chromatography system, including a valve that regulates an inlet pressure, and a pressure sensor that measures the inlet pressure and outputs a signal that indicates a measured inlet pressure. Examiner respectfully submits that the limitations “an inlet-pressure set-point that can be set to a negative pressure set-point representing a pressure below ambient pressure” indicates a possible function of the inlet (noting the limitations “can be set”), but does not provide further structural limitations which require patentable weight with regard to the prior art Japanese reference. Examiner respectfully submits that a comparison of the system components of Figure 2 of the current application and the system components of Figure 1 of Japanese reference indicates identical system components, therefore claim 1 is anticipated.

Applicant argues Shimomura does not disclose “wherein the GC includes instructions on a computer readable medium” as recited in claim 5. Examiner respectfully submits that comparator 12 includes a computer readable medium, because the comparator receives an input value(S), and it is clear that the comparator 12 includes a computer readable medium for receiving the input value and a computer for processing a comparison between an input value and a measured value. Therefore, because the claims are structural limitations, and Shimomura clearly teaches a GC which includes a computer readable medium, the claim is anticipated. Examiner

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notes that the limitations in the body of claim 5 are process steps, and are not given patentable weight for structural limitation claims. Examiner furthermore notes that the computer readable medium (comparator 12) is capable of being programmed for any set of instructions to be applied to the system, and therefore because the structural component (a computer readable medium) is present in Shimomura, the claim is anticipated.

Applicant argues Shimomura does not disclose a computer-readable medium comprising instructions, as set forth in claim 19. Applicant further argues nowhere does Shimomura provide any disclosure or description that it includes anything more than a simple comparator and alarm circuit to determine if output value P exceeds preset threshold S and to curtail flow rate. Examiner respectfully submits Shimomura teaches that comparator 12 includes a computer readable medium, because the comparator receives an input value (S), and it is clear that the comparator 12 includes a computer readable medium for receiving the input value and a computer for processing a comparison between an input value and a measured value. Examiner respectfully submits that claim 19 is directed to a product (a computer readable medium), wherein comparator 12 of Shimomura clearly includes a computer readable medium. Examiner notes that the limitations to instructions of claim 19 are not given patentable weight because the claim is directed to a product, and because Shimomura clearly teaches a computer readable medium, the computer readable medium is clearly capable of being programmed to receive any set of instructions. Furthermore, as noted in the current office action, the claim needs to be directed to a single statutory class of invention,

wherein the body of the claim needs to further recite structural components of the computer readable medium. Examiner respectfully submits that a computer program is not part of the structure of the "computer readable medium" claimed in the preamble of claim 19.

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

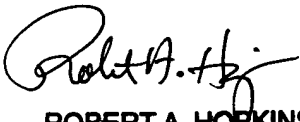
A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Robert A. Hopkins whose telephone number is 571-272-1159. The examiner can normally be reached on Monday-Thursday, 7:30am-5pm, every Friday off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Duane Smith can be reached on 571-272-1166. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Rah
May 30, 2006


ROBERT A. HOPKINS
PRIMARY EXAMINER
P.U. 1724